AMENDMENTS TO THE SPECIFICATION

Please amend the paragraph on page 3, line 26 to page 4, line 11 as follows:

A1

"FIG. 1 illustrates a LED driver 10 in accordance with the present invention for driving a LED array 40. LED driver 10 comprises a high frequency ("HF") inverter 20, and an impedance circuit 30. In response to a direct current I_{DC} from a direct voltage source V_{DC}, HF inverter 20 communicates an alternating voltage V_{AC} at a switching frequency (e.g., 20 kHz to 100 kHz) to impedance circuit 30 ~~at a switching frequency (e.g., 20 kHz to 100 kHz)~~, which in turn communicates an alternating current I_{AC} to LED array 40. HF inverter 20 allows a compact and efficient method to control the current to LED array 40. At high frequencies, the current limiting components become compact in size. HF inverter 20 also allows for an efficient current control from direct voltage source V_{DC}. Forms of ~~HR~~ HF inverter 20 include, but are not limited to, a voltage fed half bridge, a current fed half bridge, and a current fed push pull. Techniques known in the art can be employed to use frequency modulation to control output current which can be implemented to further improve the regulation of the proposed invention."

Please amend the paragraph on page 5, lines 8-18 as follows:

A2

"FIG. 3 illustrates HF inverter 20a (FIG. 2) and impedance circuit 30a (FIG. 2) driving an LED array 40b having ~~a~~ LED strings in place of single LEDs connected in "anti-parallel" configuration. Alternating current I_{AC} flows through a light emitting diode LED_1, a light emitting diode LED_3 and a light emitting diode LED_5 when alternating current I_{AC} has a positive polarity. Conversely, alternating current I_{AC} flows through a light emitting diode LED_2, a light emitting diode LED_4 and a light emitting diode LED_6 when alternating current I_{AC} has a negative polarity. In alternative embodiments, the LED strings can have differing numbers of LEDs in series as requirements warrant and may be connected in electrically equivalent configurations or in "matrix" configuration" as would be known by those skilled in the art."

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Please amend the paragraph on page ~~7~~ 6, lines 6-18 as follows:

A3

"Capacitor C2, capacitor C3, and capacitor C4 can be low cost and compact surface mounted type capacitors and may be mounted directly to LED array 40c as a subassembly. By driving pairs of LEDs in this manner, the driving scheme has the advantage that if one LED fails "open" only one pair of LEDs will go dark as opposed to a whole string as can be the case with other driving schemes. While LED array 40c is shown to consist of three pairs of anti-parallel connected LEDs one skilled in the art can see that anti-parallel connected LED "strings" as illustrated in FIG. 3 could also be connected in the same fashion as could any number of LED pairs/strings/matrixes with a corresponding number of current splitting capacitors. Furthermore, ~~if~~ differing levels of current ~~were~~ desired in different LED pairs/strings/matrixes ~~this~~ can be accomplished by choosing capacitor values of different capacitance inversely proportional to the ratio of current desired."

Please amend the paragraph on page ~~7~~ 6, lines 19-30 as follows:

A4

"FIG. 5 illustrates a third embodiment of LED driver 10 (FIG. 1). An impedance circuit 30c includes inductor L_1 coupled in series to a capacitor C_5, which is coupled in series to a parallel coupling of capacitor C_2, capacitor C_3 and capacitor C_4. Impedance circuit 30c directs a flow of alternating current I_{AC} through ~~of~~ LED array 40d. An anti-parallel coupling of light emitting diode LED_1 and light emitting diode LED_2 is coupled in series with capacitor C_2. An anti-parallel of coupling light emitting diode LED_3 and light emitting diode LED_4 is coupled in series with capacitor C_3. An anti-parallel coupling of light emitting diode LED_5 and light emitting diode LED_6 is coupled in series with capacitor C_4. A switch in the form of a transistor T_3 is coupled in parallel to the anti-parallel LED couplings. Those having ordinary skill in the art will appreciate other forms of switches that may be substituted for transistor T_3."

Please amend the paragraph on page ~~8~~ 7, lines 1-16 as follows:

A5

"Divided portions of alternating current I_{AC} can flow through light emitting diode LED_1, light emitting diode LED_3 and light emitting diode LED_5 when

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A5 cont'd

alternating current I_{AC} is in a positive polarity. Divided portions of alternating current I_{AC} ~~can~~ can flow through light emitting diode LED_2, light emitting diode LED_4 and light emitting diode LED_6 when alternating current I_{AC} is in a negative polarity. The capacitance values of capacitor C_2, capacitor C_3 and capacitor C_4 can be proportioned to divide the alternating current ~~IAC~~ I_{AC} into whatever ratios are desired for the individual LED pairs. An operation of transistor T_3 serves to divert alternating current I_{AC} from the anti-parallel LED couplings to thereby turn the LEDs off. Capacitor C_5 is included in this representation to minimize the effective impedance change seen by the half bridge 20a and hence the change in current level I_{AC} when transistor T_3 is switched on and off, but the circuit can also operate with a series resonant capacitance made up of only capacitor C_2, capacitor C_3 and capacitor C_4. It is also possible to substitute LED strings as represented in FIG. 3 or matrix connections of LEDs in place of the LED pairs."

Please amend the paragraph on page ~~8~~ 7 lines 17-21 as follows:

A6

"While three LED pairs and capacitors are shown in this representation for demonstration purposes, ~~it should be obvious to one~~ those skilled in the art will appreciate that any number of LED pairs, LED strings, and/or LED matrices can be used with suitable capacitors and drive from the half bridge 20a and can be switched with transistor T_3."

Please amend the paragraph on page 8, lines 1-11 as follows:

A7

"Divided portions of alternating current I_{AC} can flow through light emitting diode LED_1, light emitting diode LED_3 and light emitting diode LED_5 when alternating current I_{AC} is in a positive polarity. Divided portions of alternating current I_{AC} can flow through light emitting diode LED_2, light emitting diode LED_4 and light emitting diode LED_6 when alternating current I_{AC} is in a negative polarity. The capacitance values of capacitor C_2, capacitor C_3 and capacitor C_4 can be proportioned to divide the alternating current ~~IAC~~ I_{AC} into whatever ratios are desired for the individual LED pairs. An operation of transistor T_3 serves to reduce the ampere level of the divided portions of alternating current I_{AC} through the anti-parallel LED

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A7 cont'd

couplings by diverting current via capacitor C_6."

Please amend the paragraph on page ~~10~~ 9, line 26 to page ~~11~~ 10, line 13 as follows:

A8

"FIG. 8 illustrates a second embodiment of an illumination system in accordance with the present invention that combines on/off switching features as demonstrated in FIG. 5 with amplitude control features as demonstrated in FIG. 6 that can be used as an automobile rear lighting system. An impedance circuit 30e includes inductor L_1 coupled in series to a capacitive array 31a consisting of capacitor C_2, capacitor C_3, capacitor C_4 and capacitor C_5 as taught by the description of FIG. 5. Inductor L_1 is further coupled in series to a capacitive array 31b consisting of capacitor C_2, capacitor C_3, capacitor C_4, capacitor C_5 and capacitor C_6 as taught by the description of FIG. 6. HF inverter 20, impedance circuit 30e, and LED array ~~40d~~ 40c constitutes a turn signaling device whereby an operation of transistor T_3 as previously described herein in connection with FIG. 5 facilitates a flashing emission of light from LED array ~~40d~~ 40c. HF inverter 20, impedance circuit 30e, and LED array 40d constitutes a brake signaling device whereby an operation of transistor T_3 as previously described herein in connection with FIG. ~~5~~ 6 facilitates an alternating bright/dim emission of light from LED array 40d. In this embodiment, a single inductor L_1 is used to minimize the size and cost of the controlling circuit."

Please amend the paragraph on page ~~14~~ 13, lines 5-12 as follows:

A9

"A LED driver ~~is disclosed. The LED driver~~ includes a high frequency inverter and an impedance circuit. The high frequency inverter operates to produce a high frequency voltage source whereby the impedance circuit directs a flow of alternating current through a LED array including one or more anti-parallel LED pairs, one or more anti-parallel LED strings, and/or one or more anti-parallel LED matrixes. A transistor can be employed to divert the flow of the alternating current from the LED array, or to vary the flow of the alternating current through LED array."